WHAT IS CLAIMED IS:

1. A computer-readable recording medium for a video game, with the medium recording a video game program for transforming a three-dimensional object having a shape

5   defined with a plurality of vertexes, the program causing the computer;

to obtain the rotation angle of each joint in a virtual skeleton of the three-dimensional object constituted with a plurality of joints with each of the

10   plurality of vertexes made to correspond to any one of the plurality of joints according to animation data defining the movement of the virtual skeleton at every frame display period; and

to calculate the rotation angle of the vertex on the

15   basis of the obtained rotation angle of each joint and a weight predefined for the vertex corresponding to the joint, and to move the vertex according to the rotation angle at every frame display period.

2. A computer-readable recording medium for a video

20   game of claim 1, wherein in the movement of the vertex, the rotation angle of the vertex is calculated on the basis of one rotation angle relative to one rotation axis determined with the obtained rotation angle of the joint and the weight predefined for the vertex corresponding to

25   the joint and the vertex is moved to a position obtained by rotating the vertex through the rotation angle about

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the one rotation axis.

3. A computer-readable recording medium for a video game of claim 1, wherein the obtaining of the rotation angle of the joint, the rotation angle of each joint is obtained for each of three rotation axes intersecting at right angles; and

in the movement of the vertexes, one rotation axis and one rotation angle are calculated on the basis of the three obtained rotation angles of the joints;

the one calculated rotation angle is interpolated on the basis of the weight predefined for the vertex and the rotation angle of the vertex is calculated; and

the vertex is moved according to the calculated rotation angle of the vertex and the one rotation axis at the every display period.

4. A computer-readable recording medium for a video game of claim 1, wherein in the calculation of the rotation angle of the vertex, the one rotation angle is sphere-linear-interpolated according to the weight predefined for the vertex to calculate the rotation angle of the vertex.

5. A computer-readable recording medium for a video game of claim 1, wherein the vertex corresponding to the one joint is sorted with the weight predefined for the vertex; and

in the movement of the vertex, a determination is

made whether the same weight as that predefined for the vertex moved immediately before is defined for the vertex to be moved;

5   when it is determined that the same weight as that predefined for the vertex moved immediately before is not defined for the vertex to be moved, the rotation angle of the vertex to be moved is calculated on the basis of the obtained rotation angle of the joint corresponding to the vertex to be moved and the weight predefined for the vertex

10   to be moved, and data on the rotation angle is stored; the vertex to be moved is moved according to the stored data on the rotation angle, and

when it is determined that the same weight as that predefined to the vertex moved immediately before is

15   defined for the vertex to be moved, the vertex to be moved is moved according to the stored data on the rotation angle.

6. A computer-readable recording medium for a video game of claim 1, wherein in the movement of the vertex,

20   a determination is made whether the same weight as that predefined for the already moved vertex among the vertexes corresponding to the same joints is defined for the vertex to be moved;

when it is determined that the same weight as that

25   predefined for the already moved vertex among the vertexes corresponding to the same joints is not defined for the

vertex to be moved, the rotation angle of the vertex is calculated according to the obtained rotation angle of the joint corresponding to the vertex to be moved and the weight predefined for the vertex to be moved, and the data

5   on the rotation angle is associated with the weight of the vertex and stored;

the vertex to be moved is moved according to the calculated rotation angle; and

when it is determined that the same weight as that

10   predefined for the already moved vertex among the vertexes corresponding to the same joints is defined for the vertex to be moved, the data on the rotation angle stored as associated with the weight predefined for the vertex to be moved is obtained, and the vertex to be moved is moved

15   according to the data on the rotation angle.

7.   A method of transforming a three-dimensional object having a shape determined with a plurality of vertexes in a video game, wherein the rotation angle of each joint in a virtual skeleton of the three-dimensional object

20   constituted with a plurality of joints with each of the plurality of vertexes made to correspond to any one of the plurality of joints is obtained at every frame display period, according to animation data defining the movement of the virtual skeleton, and

25   the rotation angle of the vertex is calculated on the basis of the obtained rotation angle of each joint and a

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weight predefined for the vertex corresponding to the joint, and the vertex is moved at every frame display period, according to the rotation angle.

8. A method of transforming a three-dimensional
5   object in a video game of claim 7, wherein in the movement of the vertex, the rotation angle of the vertex is calculated on the basis of one rotation angle relative to one rotation axis determined with the obtained rotation angle of the joint and the weight predefined to the vertex
10 corresponding to the joint, and the vertex is moved to a position obtained by rotating the vertex through the rotation angle about the one rotation axis at every frame display period.

9. A method of transforming a three-dimensional
15 object in a video game of claim 1, wherein the rotation angles of the three rotation axes intersecting at right angles are obtained,

in the movement of the vertex, one rotation axis and one rotation angle are calculated on the basis of the
20 obtained rotation angles of the three rotation axes of the joint;

the obtained one rotation angle is interpolated according to the weight predefined for the vertex to calculate the rotation angle of the vertex; and
25   the vertex is moved according to the calculated rotation angle and the one rotation axis.

10. A video game apparatus for transforming a three-dimensional object having a form at least a part of which is determined by a plurality of vertexes associated with a cluster, said apparatus having:

5   a computer; and

a computer-readable recording medium having recorded therein a program to be executed by said computer;

said program causing said computer to execute:

10   obtaining the rotation angle of each joint in a virtual skeleton of the three-dimensional object which is constituted with a plurality of joints and in which each of the plurality of vertexes corresponds to any one of the plurality of the joints at every frame display period, 15 according to the basis of the animation data defining the movement of the virtual skeleton, and

calculating the rotation angle of the vertex on the basis of the rotation angle of each joint obtained with the obtaining of the rotation angle and the weight 20 predefined for the vertex corresponding to the joint and for moving the vertex according to the calculated rotation angle at every frame display period.

11. A video game apparatus for transforming a three-dimensional object of a shape determined with a 25 plurality of vertexes, comprising:

a computer and

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a computer-readable recording medium recording a program to be executed with the computer,

the program causes the computer to execute;

obtaining the rotation angle of each joint in the

5   virtual skeleton of the three-dimensional object which is constituted with a plurality of joints and in which each of the plurality of vertexes corresponds to any one of the plurality of the joints, at every frame display period according to the animation data defining the movement of

10   the virtual skeleton, and

calculating the rotation angle of the vertex on the basis of the rotation angle of each joint obtained with the obtaining of the rotation angle and the weight predefined for the vertex corresponding to the joint and

15   moving the vertex according to the calculated rotation angle at every frame display period.

12. A computer program for a video game, for transforming a three-dimensional object having a shape defined with a plurality of vertexes, the computer program

20   causing the computer;

to obtain the rotation angle of each joint in a virtual skeleton of the three-dimensional object constituted with a plurality of joints with each of the plurality of vertexes made to correspond to any one of the

25   plurality of joints according to animation data defining the movement of the virtual skeleton at every frame

display period; and

   to calculate the rotation angle of the vertex on the
basis of the obtained rotation angle of each joint and a
weight predefined for the vertex corresponding to the
5   joint, and to move the vertex according to the rotation
angle at every frame display period.

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